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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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LICATA & TYRRELL P.C.
66 E. MAIN STREET
MARLTON, NJ 08053

EXAMINER	
SZPERKA, MICHAEL EDWARD	

ART UNIT	PAPER NUMBER
1644	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

poreilly@licataandtyrrell.com

Office Action Summary	Application No.	Applicant(s)	
	10/563,204	URBANIAK ET AL.	
	Examiner	Art Unit	
	Michael Szperka	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,11,12 and 14-17* is/are pending in the application.

4a) Of the above claim(s) *1,2 and 4-7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11, 12, and 14-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response and claim amendments received December 2, 2009 are acknowledged.

Claims 3, 8-10, and 13 have been canceled.
Claims 1 and 11 have been amended.
Claims 1, 2, 4-7, 11, 12, and 14-17 are pending in the instant application.
Claims 1, 2, and 4-7 stand withdrawn from consideration as being drawn to a nonelected invention. See 37 CFR 1.142(b) and MPEP § 821.03, for reasons of record set forth in the restriction requirement mailed February 22, 2008.

Claims 11, 12, and 14-17 are under examination in this office action.

In regards to the finding of lack of unity among the inventions of the instant application, applicant has argued as part of the December 2, 2009 response that the amendments to the independent claims to recite "linear peptide fragment of a human platelet antigen" defines the technical feature and thus the instant applications are entitled to unity of invention. This is not persuasive. First, there is no size limit defined in either the claims themselves or in the specification concerning "linear peptide" and thus the peptides disclosed by Bowditch et al. are still applicable. Further, 13mer peptides spanning the HPA1 mutation are known in the prior art, as demonstrated by Flug et al. Thus, applicant's inventions have not been rejoined and there is no unity of invention in the instant application.

Specification

2. Applicant's amendments to the title and abstract are acknowledged.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The rejection of claims 11, 12, and 17 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in view of applicant's claim amendments received December 2, 2009.

Specifically, the independent claim has been amended to limit the platelet protein in question to HPA, a.k.a. glycoprotein IIIa (GPIIIa) and integrin β_3. Note that the point mutations in GPIIIa which give rise to the numerous HPA alleles are disclosed on page 6 of the instant specification.

5. Claims 11, 12, and 14-17 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention for the reasons of record.

The office action mailed July 2, 2009 states:

> Applicant has claimed generic methods of preventing and managing conditions resulting from exposure to allogeneic platelet proteins, with dependent claims limiting the platelet protein to human platelet antigen (HPA) which is also known as glycoprotein IIIa (GPIIIa). The specification discloses that 15 mer peptides which are subsequences of GPIIIa which comprise the substitution of leucine for proline at position 33 of the full length sequence, when presented by appropriate MHC matched APC can be used to stimulate T cells in PBMC isolated from mothers who developed anti-GPIIIa alloantibodies as a result of a pregnancy. The specification asserts that immunodominant T cell epitopes of GPIIIa identified by applicants can be used to induce tolerance to allogeneic GPIIIa proteins on page 15, but no data or working examples concerning the administration of such peptides to patients, human or otherwise, is presented in the specification. It should also be noted that while the instant claims do not specifically recite administering to a human patient, it is clear from the text of the specification, the fact that the sequences recited in the dependent claims are human GPIIIa sequences, and the general disinterest in the art for treating conditions such as FMAIT, post-transfusion purpura, and platelet refractoriness in non-human subjects, that the purpose of applicant's claimed invention clearly is the treatment of human patients, and the claims have been examined in this light.
>
> However, the specification's disclosure is insufficient to enable one skilled in the art to practice the invention as claimed without an undue amount of experimentation. Undue experimentation must be considered in light of factors including: the breadth of the claims, the nature of the invention, the state of the prior art, the level of one of ordinary skill in the art, the level of predictability of the art, the amount of direction provided by the inventor, the existence of working examples, and the quantity of experimentation needed to make or use the invention.

Regarding *in vivo* methods which rely on previously undescribed and generally unpredictable mechanisms, "The amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art." *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). The "amount of guidance or direction" refers to that information in the application, as originally filed, that teaches exactly how to make or use the invention. The more that is known in the prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification. In contrast, if little is known in the prior art about the nature of the invention and the art is unpredictable, the specification would need more detail as to how to make and use the invention in order to be enabling (MPEP 2164.03)."

Attempts to induce tolerance in humans have been completely unsuccessful in multiple different documented instances. See for example, *Marketletter* (9/13/99) which teaches the complete failure of tolerance induction in human trials. Both Myloral (for multiple sclerosis, MS) and Colloral (for rheumatoid arthritis, RA) provided successful results in inducing tolerance in small in-bred animal models, however, both were complete failures in human trials. Also see Pozzilli et al. (2000), wherein the authors demonstrate that, while the induction of tolerance to orally administered insulin for the treatment of diabetes might have been expected, it simply did not occur. The authors could only speculate as to the reasons for the trial's failure. The authors did note one complicating factor that has been reported several times, and will have to be considered in all future work, a large placebo effect wherein both the treated and control subjects showed similar temporary improvement. Three years later Skyler et al. (2005) reported another failure in one of the largest placebo-controlled tolerance trials ever performed in humans (the administration of insulin for the prevention of type 1 diabetes).

Other investigators have gone beyond simply reporting and have tried to consider the reasons for the unexplained problems in establishing human tolerance. See, for example, Dong et al. (1999):

> "Despite the fact that it has been relatively easy to induce true tolerance in small experimental animals, translating these studies into larger animals and humans has been much more difficult to achieve. Some of the hurdles that may explain this dilemma are summarized in Table 3. *Even if we have the ideal strategy to use in humans, the lack of reliable predictable assays for rejection or tolerance still does not allow us to know if a patient is truly tolerant so that immunosuppressive agents may be withdrawn*", (emphasis added).

WO 02/053092 teaches that the oral administration of antigens for the induction of tolerance presents numerous additional "obstacles", including the problem of accurate dosing given the necessity of digestion which alters both concentration and structure of the antigens. In that work the inventors conclude that:

> "oral and mucosal tolerance cannot be deduced from antigenic activity in conventional immunization, or even *in vitro* results, and must result from extensive empirical experimentation" (page 23)

In another attempt to explain these repeated failures Goodnow (2001) states:

> "Obtaining the desired response [tolerance] with these strategies [tolerance induction] is unpredictable because many of these

> signals [tolerogenic] have both tolerogenic and immunogenic roles"

(see the Abstract). The author goes on to teach that while the induction of oral tolerance might be considered "an attractive notion", the method has failed in humans because of the lack of understanding of the mechanisms involved (page 2120, column 2). Note that an oral medication would be absorbed by the gastrointestinal mucosa.

More recently, Kraus and Mayer (2005) looked at tolerance induction in inflammatory bowel disease (IBD). They reported the ease with which tolerance is induced in in-bred experimental mice and contrasted that with the difficulty in inducing tolerance in humans. Speculating on the reasons for the difference the authors considered a lack of dosing optimization but went on to report that *the mechanisms of tolerance induction in humans and mice appear to be fundamentally different.* Most importantly, Kraus and Mayer report a genetic component wherein many IBD patients and their family members appear to be *incapable* of becoming tolerant to oral antigens because they lack the ability to generate the required T regulatory cells. If confirmed, this would mean that *no* tolerance induction regime could work in these patients.

Even more recent work has attempted to duplicate favorable results established in in-bred animal models in a more complex mouse model more realistic to the out-bred human population. See, for example, Bell et al. (2008). The authors employed F_1 hybrid mice (a cross between two in-bred strains) wherein they asked if toleragens that worked in the parent strains would induce tolerance in the crossed F_1 hybrid mice. Unfortunately the results showed that in one instance not only was tolerance not induced, but disease was actually exacerbated. Thus, the work serves as a clear demonstration that the induction of immune tolerance is far from predictable in anything other than carefully chosen in-bred experimental mouse strains.

As set forth in *Rasmusson v. SmithKline Beecham Corp.*, 75 USPQ2d 1297, 1302 (CAFC 2005), enablement cannot be established unless one skilled in the art, "would accept without question" an Applicant's statements regarding an invention, particularly in the absence of evidence regarding the effect of a claimed invention. Specifically:

> "As we have explained, we have required a greater measure of proof, and for good reason. If mere plausibility were the test for enablement under section 112, applicants could obtain patent rights to "inventions" consisting of little more than respectable guesses as to the likelihood of their success. When one of the guesses later proved true, the "inventor" would be rewarded the spoils instead of the party who demonstrated that the method actually worked. That scenario is not consistent with the statutory requirement that the inventor enable an invention rather than merely proposing an unproved hypothesis."

A review of the instant specification shows no induction of tolerance.

In re Wands, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. Given that the induction of immune tolerance has been referred to as the seeking of the "Holy Grail" of transplantation (Schroeder et al. (2003)), fraught with difficulties not even considered in the instant specification, further in view of the quantity of experimentation necessary, the lack of sufficient guidance in the specification, the lack of sufficient working examples, i.e., the specification discloses no data relevant to the induction of tolerance, the unpredictability of the art, and the breadth of the claims, it would take undue trials and errors to practice the claimed invention.

Applicant's arguments filed December 2, 2009 have been fully considered but they are not persuasive. Applicant begins by arguing that tolerance induction is routine in the allergy art, and thus there is no inherent problem with administering peptides to induce tolerance based upon the long history of specific immunotherapy (SIT).

This argument is not persuasive. The term "tolerance" implies the mechanism of action why which the instant invention is believed would work if it were to be reduced to practice. The specification does not provide an explicit definition of tolerance, but lines 14-18 of page 4 state:

> The patient's immune system then over a period of time becomes tolerant to the peptide or protein and, therefore, does not consider the protein or peptide foreign. Accordingly, no effector immune response is raised.

Effector responses include T and B cell responses. US patent 6,486,311 discusses specific immunotherapy and states:

> The only therapeutic option presently available for the prevention of a food hypersensitivity reaction is food avoidance. Unfortunately, for a ubiquitous food such as peanut, the possibility of an inadvertent ingestion is great. One therapeutic option used extensively for patients with allergic reactions to various aeroallergens and insect sting venoms is allergen desensitization immunotherapy. Allergen immunotherapy consists of injections of increasing amounts of allergens to which a patient has Type I immediate hypersensitivity. Allergens for immunotherapy are usually extracted from natural sources and represent mixtures of several different proteins, to many of which the patient is not allergic. These non-allergenic components could induce an IgE-response in hyposensitized patients thus complicating their use as a therapeutic tool. One of the major improvements in allergen immunotherapy has been the use of standardized allergenic extracts which has been made possible by the use of recombinant allergens. *While the absolute mechanism of immunotherapy is unknown, an increase in IgG or IgG4 antibody activity, a decrease in allergen-specific IgE levels, and a decrease in basophil activity have all been implicated* in mediating this response. Because allergen immunotherapy has been proven efficacious for treatment of some allergies, treatment with peanut immunotherapy is now being studied as a possible option. (column 15, emphasis added).

Note that as stated by the '311 patent, immunotherapy for allergies typically increase IgG, particularly IgG4 antibody levels. See also the right column of page s70 and Figure 2 of the Larche reference cited in applicant's response. Increased antibody production is clearly an effector function and thus, contrary to applicant's arguments, is not "tolerance" per the guidance in the specification. See also Weber et al., particularly

section 1.2.1 which indicates that effectors are responsible for B cell responses.

Indeed, the word "tolerance" is often used by different artisans to mean different things. For example, some artisan consider clonal anergy and deletion as part of "tolerance" (see the paragraph spanning the left and right columns of page s72 and Figure 3 of Larche) while the Campbell reference cited by applicant discusses a tolerance mechanism concerning the secretion of IL-10 by T cells. Secretion of cytokines by a T cell is typically considered to be an effector function so the mechanisms of Campbell are not consistent with the guidance and direction of the instant specification. The Barker et al. reference cited by applicant discusses tolerance as being an active process mediated by autoantigen specific T cells which secrete IL-10. Larche discloses that peptide therapy specifically causes this antigen-specific, cytokine secreting population of T cells to expand, and that both the route and dosage of administered peptide are critically important to insure that tolerance, however defined by the artisan, is actually observed. As was cited in the rejection of record, there is no working example concerning administering peptides for therapy, and there does not appear to be any guidance concerning dosage, a critically important aspect of therapy as discussed in the Larche reference cited by applicant. Applicant is further reminded that an application must be enabled at the time of filling, and that later developed techniques and practices cannot be used to demonstrate enablement since such techniques by definition were unknown at the time of filing.

Applicant further argues that the experiments presented in the instant specification, namely the proliferation of PBMC in response to specific peptides constitutes a "working example" of the claimed invention. Applicant believes this is so because all of the data cited by the examiner concerning the failure to induce "tolerance" in autoimmune diseases such as MS, RA, and type I diabetes is not material since their etiologies are different and may comprise additional defects which preclude tolerance. Applicant argues that the patients of the instant method start out healthy and normal without any underlying predisposition to disease and become diseased only after exposure to a foreign blood group antigen.

This argument is not persuasive because a reasonable argument can be made

that the patient of the instant methods has an underlying genetic susceptibility in that he/she has the wrong GPIIIa allele as compared to the administered blood product. If there was no mismatch, there would be no thrombocytopenia and therefore no need for treatment. Further, given that the diseases cited by the examiner are very diverse and are very different from one another it argues that the problems with tolerazation are universally applicable to all disease states, especially in the absence of evidence to the contrary.

Applicant extends the prior argument by arguing that other autoimmune diseases are complicated and involve lots of different antigens whereas the antigen at fault in the instant methods is singular and well known, allowing for efficient elucidation of relevant T cell epitopes.

This argument is not persuasive. While many autoimmune diseases do comprise multiple autoantigens, the identities of these autoantigens and the T cell epitopes within them have been elucidated, allowing for their use in animal models, whose encouraging success led to human clinical trials which then failed. No data has been provided by applicant as to why tolerance would be expected by artisans to occur in the instant case when it has not occurred in other disease settings.

Applicant concludes by asserting that there is a reasonable correlation between the observed in vivo peptide specific proliferation data reported in the specification and the claimed methods for the "prevention or management of a condition caused by exposure to an antithetical allele of a platelet".

This argument is not persuasive. First, many notable clinical trials in humans have failed to observe tolerance as has been discussed above. Further, in the paragraph spanning pages 14 and 15 of the specification, the T cells which proliferated in response to the GPIIIa peptides are disclosed as being responsible for providing B cell help for the generation of autoantibodies. However, it is known in the art that the T cell epitopes recognized by regulatory and effector T cells can be distinct (Weber et al., see particularly the paragraph spanning pages 972 and 973) and applicant has not provided data concerning recognition of epitopes by regulatory T cells. Further, all of the post filing date art cited by applicant to demonstrate the induction of tolerance in the

art appear to be capable of eliciting an IgG response, particularly of the IgG4 isotype. Given that the thrombocytopenia observed following administration of a mismatched blood product is autoantibody based, the elaboration of additional antibodies appears to be counterproductive.

Therefore, in view of the breadth of the claims, the teachings of the art, and the guidance and direction of the instant specification, artisans would reasonably assume that applicant's claimed invention was not enabled that the time the invention was filed for the reasons discussed above.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 11-17 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16-22 of copending Application No. 12/096,092 for the reasons of record.

As was stated in the July 2, 2009 office action:

> Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending claims also recite methods of administering peptides to cause tolerization in a patient exposed to an antithetical allele. The copending methods recite that the tolerizing peptide is a T cell antigen and that the treated disorders include transfusion reactions. Thus the copending claims anticipate some of the instant claims and significantly overlap in scope with other claims of the instant invention.
>
> This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant has argued that the instant application is earlier filed with regard to the '092 application, and that since applicant believes that their arguments are sufficient to remover all other grounds of rejection, applicant argues that this provisional rejection should be withdrawn and that the earlier filed application should be allowed to issue.

This argument is not persuasive since as discussed above, applicant's arguments and claim amendments have not resulted in all other rejections being withdrawn. As such, the provisional rejection is maintained.

The following is a new ground of rejection necessitated by applicant's claim amendments received December 2, 2009.

Claims 11, 12, 14, 15, and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicant has amended the independent claim to recite "linear peptide fragment" and has argued that support for such an amendment can be found on line 31 of page 7. The text of that passage is as follows:

> In the present invention a set of linear peptides with the polymorphism at every possible position in 15 mer peptides (see Figure I) was derived, and this was successful in identifying Leu-33-peptide specific responses.

Thus, the context for the phrase "linear peptide" is limited to sequences of 15 amino acids. In contrast, the instant claims comprise no such length limitation. Indeed,

the size of the peptide used in the instant claimed methods reasonably ranges from two consecutive amino acids all the way to full length GPIIIa in a reducing buffer (such that internal disulfide bonds are broken, resulting in a linear structure of covalent bonds between the amino acid residues). Given this discrepancy in scope between what is disclosed in the specification and what has been claimed, applicant's claim amendments appear to have introduced new matter into the presently claimed invention. In response, it is suggested that applicant either point out where additional support for the present limitation can be found or amend the claim to remove the offending material.

8. No claims are allowable.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Szperka whose telephone number is (571)272-2934. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Szperka, Ph.D.
Primary Examiner
Art Unit 1644

/Michael Szperka/
Primary Examiner, Art Unit 1644